



## Global warming and hepatotoxin production by cyanobacteria: What can we learn from experiments?

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**Author(s):** El-Shehawy R, Gorokhova E, Fernandez-Pinas F, del Campo FF  
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### Abstract:

Global temperature is expected to rise throughout this century, and blooms of cyanobacteria in lakes and estuaries are predicted to increase with the current level of global warming. The potential environmental, economic and sanitation repercussions of these blooms have attracted considerable attention among the world's scientific communities, water management agencies and general public. Of particular concern is the worldwide occurrence of hepatotoxic cyanobacteria posing a serious threat to global public health. Here, we highlight plausible effects of global warming on physiological and molecular changes in these cyanobacteria and resulting effects on hepatotoxin production. We also emphasize the importance of understanding the natural biological function(s) of hepatotoxins, various mechanisms governing their synthesis, and climate-driven changes in food-web interactions, if we are to predict consequences of the current and projected levels of global warming for production and accumulation of hepatotoxins in aquatic ecosystems.

**Source:** <http://dx.doi.org/10.1016/j.watres.2011.11.021>

### Resource Description

#### Exposure :

weather or climate related pathway by which climate change affects health

Food/Water Quality

**Food/Water Quality:** Biotoxin/Algal Bloom

#### Geographic Feature:

resource focuses on specific type of geography

Freshwater

#### Geographic Location:

resource focuses on specific location

Global or Unspecified

#### Health Impact:

specification of health effect or disease related to climate change exposure

# Climate Change and Human Health Literature Portal

Infectious Disease

**Infectious Disease:** Foodborne/Waterborne Disease

**Foodborne/Waterborne Disease:** Marine Toxin Syndrome

**Resource Type:** 

format or standard characteristic of resource

Review

**Timescale:** 

time period studied

Time Scale Unspecified